SEP 18 2006
PATENT & TRADEMARK OFFICE
AP100

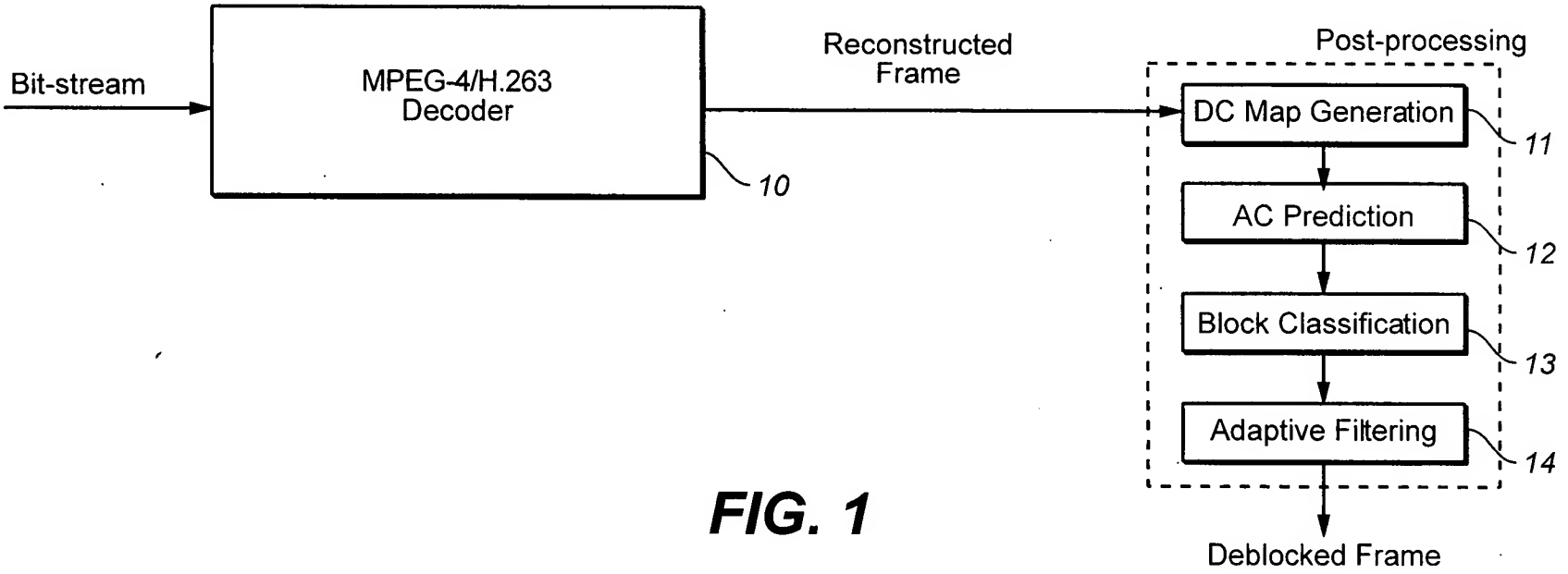

FIG. 1

Reconstructed Blocks

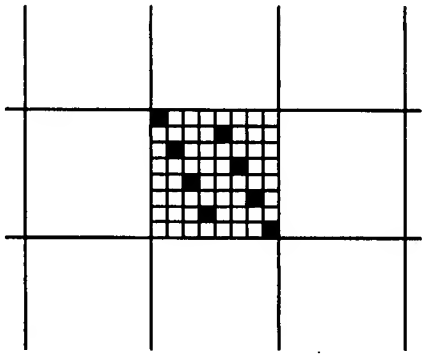

FIG. 2a

DC_1	DC_2	DC_3
DC_4	DC_5	DC_6
DC_7	DC_8	DC_9

FIG. 2b

DCT Block

	AC_{01}	AC_{02}	
AC_{10}	AC_{11}		
AC_{20}			

FIG. 2c

Replacement Sheet
AP118HO, Serial No.: 10/037, 767
Customer No.: 20178

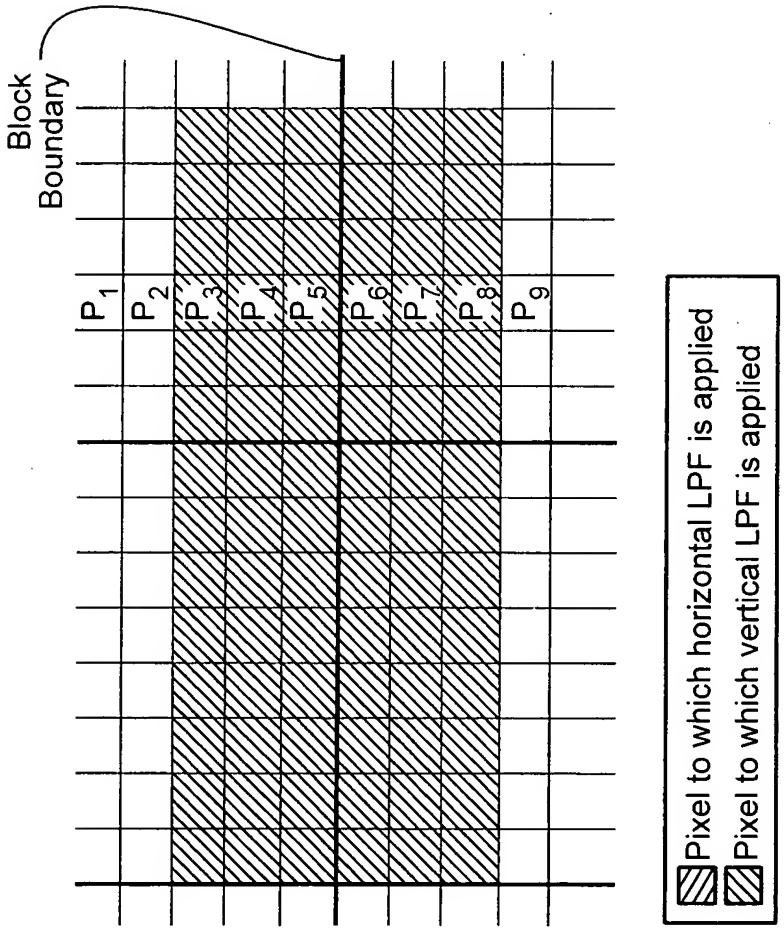
Block Boundary
P1
P2
P3
P4
P5
P6
P7
P8
P9
Pixel to which horizontal LPF is applied
Pixel to which vertical LPF is applied

FIG. 3b

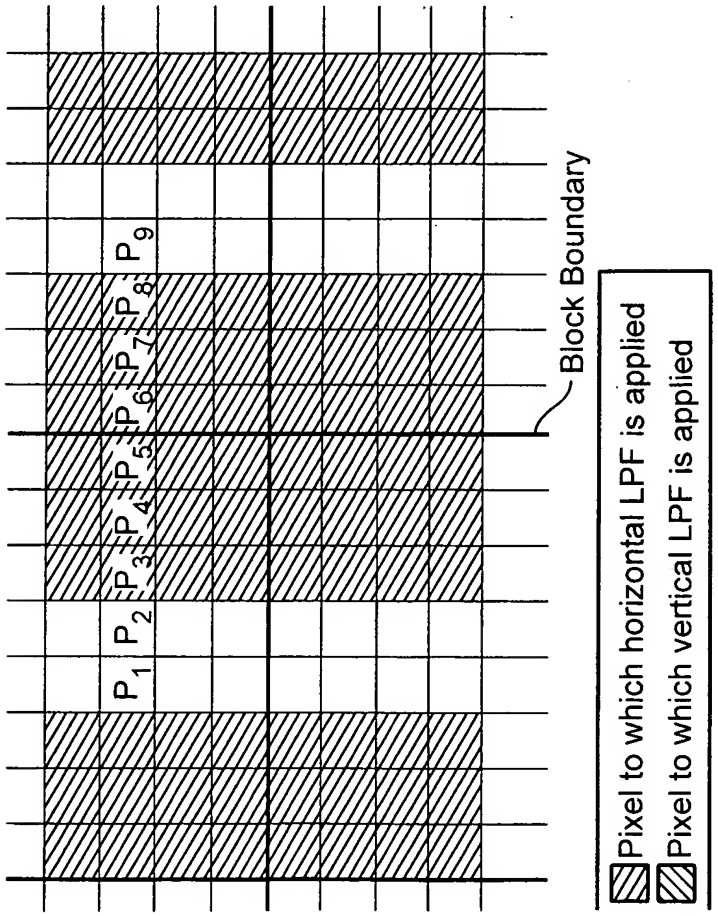
Block Boundary
P1
P2
P3
P4
P5
P6
P7
P8
P9
Pixel to which horizontal LPF is applied
Pixel to which vertical LPF is applied

FIG. 3a

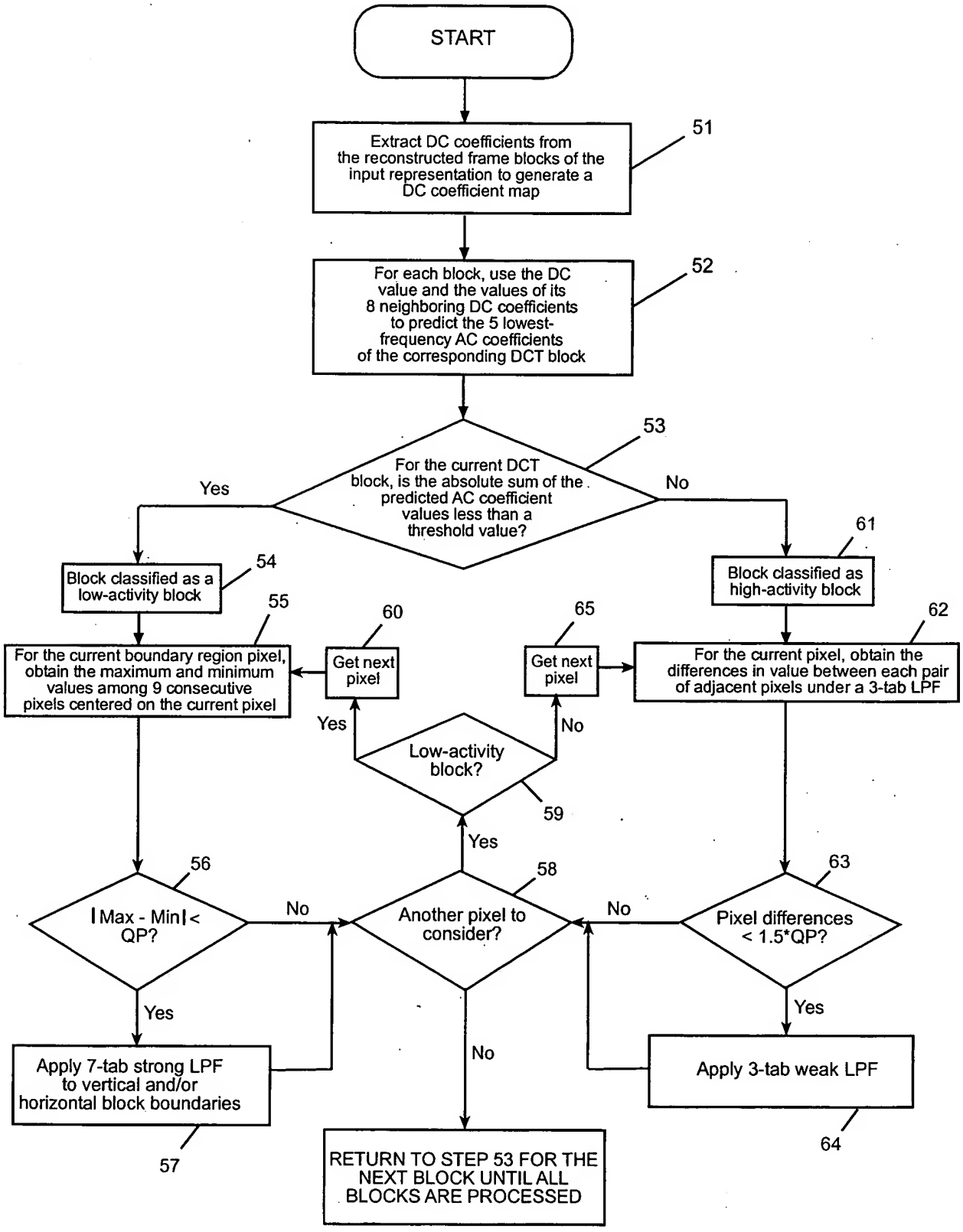
START
Extract DC coefficients from the reconstructed frame blocks of the input representation to generate a DC coefficient map
51
For each block, use the DC value and the values of its 8 neighboring DC coefficients to predict the 5 lowest-frequency AC coefficients of the corresponding DCT block
52
For the current DCT block, is the absolute sum of the predicted AC coefficient values less than a threshold value?
53
Yes
No
Block classified as a low-activity block
54
Block classified as high-activity block
61
For the current boundary region pixel, obtain the maximum and minimum values among 9 consecutive pixels centered on the current pixel
55
Get next pixel
60
Get next pixel
65
For the current pixel, obtain the differences in value between each pair of adjacent pixels under a 3-tab LPF
62
Low-activity block?
59
Yes
No
|Max - Min| < QP?
56
Another pixel to consider?
58
Pixel differences < 1.5*QP?
63
Yes
No
Apply 7-tab strong LPF to vertical and/or horizontal block boundaries
57
Apply 3-tab weak LPF
64
RETURN TO STEP 53 FOR THE NEXT BLOCK UNTIL ALL BLOCKS ARE PROCESSED

FIG. 6

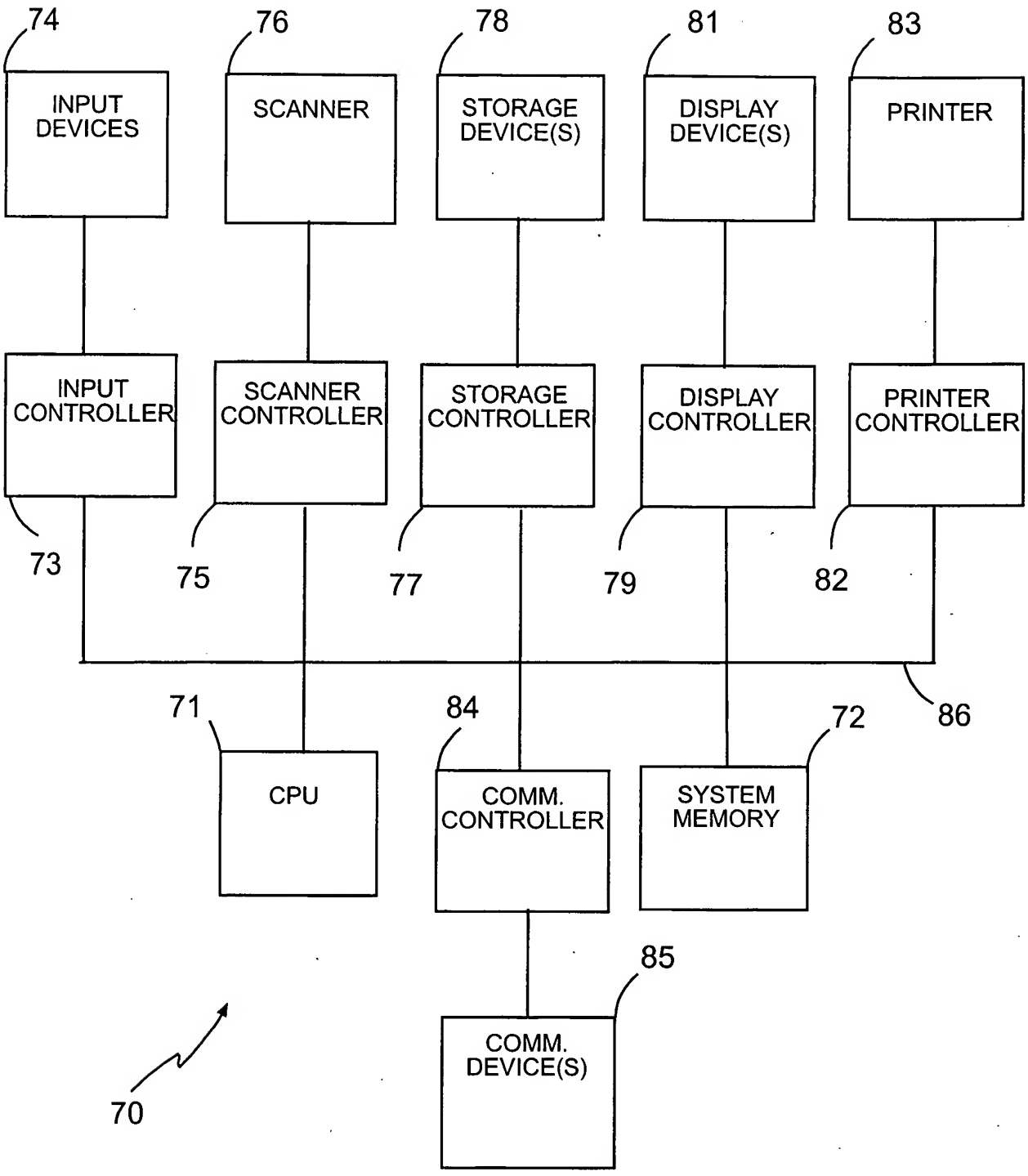
74
INPUT DEVICES
76
SCANNER
78
STORAGE DEVICE(S)
81
DISPLAY DEVICE(S)
83
PRINTER
INPUT CONTROLLER
SCANNER CONTROLLER
STORAGE CONTROLLER
DISPLAY CONTROLLER
PRINTER CONTROLLER
73
75
77
79
82
86
71
CPU
84
COMM. CONTROLLER
72
SYSTEM MEMORY
85
COMM. DEVICE(S)
70

FIG. 7

This Page Blank (uspto)